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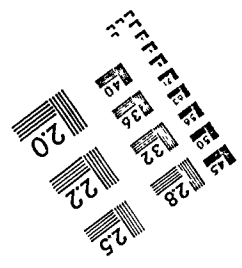
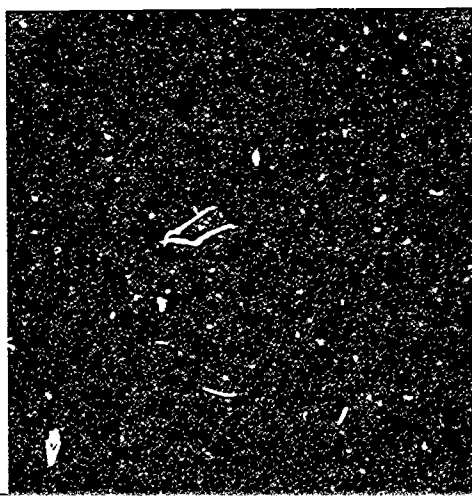
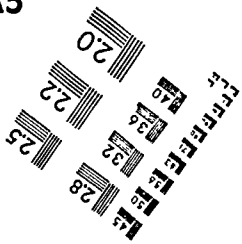
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ABSTRACT

This paper investigates the utility of various procedures used to locate and interview veterans as part of a longitudinal research study being conducted for the Department of Defense. The populations are comprised of below entry aptitude standards males who entered the military during the late 1960s, and potentially ineligible who entered between 1976 and 1980. The latter group entered because of the misnorming of the enlistment exam scores. Several methods was used to locate subjects of both populations and compared to existing data collected from National Longitudinal Surveys on equivalent samples of low-aptitude non-veteran males. Future researchers are encouraged to investigate multiple locating methodologies and assess the quality of existing data and known characteristics of the population prior to embarking on longitudinal data collection with special populations.  
 (Author/SLD)

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THE REALITY OF LONGITUDINAL DATA COLLECTION: LOCATING  
VANISHING VETERANS

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and

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National Opinion Research Center (NORC)

Paper presented at the 95th Annual Convention of the  
American Psychological Association, New York, NY.

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## The Reality of Longitudinal Data Collection: Locating Vanishing Veterans

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Longitudinal research allows an opportunity to intensively examine a population over a prolonged period of time. Longitudinal research focuses on a given sample and investigates these members at designated point(s) in time. However, longitudinal research is infrequently used in studies of large samples over a period of several years because of the extensive effort required to follow-up subjects. While many critical questions in areas of military service can be addressed best with longitudinal research designs, it is seldom practical (Jennings and Markus, 1976).

The present study, being conducted for The Department of Defense (DoD) by the Human Resources Research Organization and the National Opinion Research Center (NORC) affords an opportunity to investigate various procedures used to conduct longitudinal research on two populations of veterans. The populations are comprised of below entry aptitude standard males who entered the military during the late sixties as part of "Project

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100,000" and Potentially Ineligibles (PIs) (Greenberg, 1980) who entered between 1976-80 as a result of the misnorming of enlistment exam scores.<sup>1</sup>

Data are being gathered through a telephone survey of random samples from both populations and compared to existing data collected on equivalent samples of low-aptitude nonveteran males responding to the National Longitudinal Survey (NLS). Figure 1 provides an overview of the study design. NLS were administered to two separate large samples representative of the national youth population between 1966-81 and 1979-87. Subsamples of low-aptitude nonveteran males were selected from each MS sample for comparisons with data on Project 100,000 and PI respondents. Data contained in military records was used to supplement data collected on veterans through telephone interviews.

This paper explores the quality and utilization of military databases and records to identify and locate veterans who served in the military up to 22 years earlier. The use of several alternative methods for locating veterans, the relative effort and success for each locating method, and the unique characteristics of these populations that may have required additional locating efforts are discussed. Further, this paper provides a

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<sup>1</sup>Project 100,000 was a DoD initiative during 1966-70 to accept below minimum standards males into the military services, citing the "unique capability" of the military to produce fully satisfactory servicemen from culturally disadvantaged backgrounds and to train/utilize lower-aptitude men who would be required in the event of a full mobilization. The PIs were also below minimum standard males accepted into the military services between 1976-80 as a result of misnorming of the Armed Services Vocational Aptitude Battery (ASVAB).

description of the requirements and obstacles in conducting longitudinal research.

### Selecting Samples

Defense Manpower Data Center. The Defense Manpower Data Center (DMDC) selected random samples of 1,396 Project 100,000 participants and 1,424 PI cases. These samples were then randomly categorized into several replicate samples to allow locating efforts to be exhausted within a replicate sample before additional replicate samples were used. Currently all locating efforts and interviews have been conducted within the first replicate samples for both groups. All statistics reported in this paper refer to the initial replicate samples of 700 Project 100,000 cases and 1,020 PI cases selected to yield 400 and 700 completed cases required for each sample, respectively.

Demographic data and information which could be used to locate veterans (e.g., last address, date of birth, social security numbers) were retrieved for each case following a search of DMDC databases. However, data records maintained on 1960s and early 1970s cases were of poor quality; data required for locating respondents were often missing from databases or outdated. Approximately 17 percent of PI cases and over 63 percent of Project 100,000 cases were without names.

Inconsistencies between entering scores and renormed scores from the Armed Forces enlistment exam were found for approximately 18 percent of cases in the PI sample, even when misnorming was taken into account.



Discrepancies in the DMDC database concerning current military status also caused confusion for approximately nine percent of cases in both samples.

National Personnel Records Center. The abstraction of veteran's paper records housed at the National Personnel Records Center (NPRC) in St. Louis, Missouri was required to search for additional data and updated information that could be used in locating efforts. NPRC stores all existing records of discharged personnel who have ever served in the U.S. Armed Forces. Efforts to locate and abstract military records for 1,845 veterans who separated from the military were conducted by project personnel for more than eight weeks.

NPRC retrieved files for 91 percent of the veterans in both samples. Documents within veterans' files differed substantially, requiring extensive training of researchers to identify documents containing relevant locating information. Personnel History Questionnaire (DF 398 or DD 1966), Certificate of Discharge (DD 214), Enlistment Agreement (DD 4), Record of Induction (DD 47) and the National Agency Request Check (DD 1584) were the primary documents copied. These forms contain information on a subject's family, residence, enlistment, discharge, employment, and education. These documents, as well as other relevant documentation (i.e. birth certificates, VA forms, requests for military records and letters with the subject address) that would aid location efforts were copied by project personnel and forwarded to the National Opinion Research Center for processing. The retrieval, copying, and abstracting of files averaged 45 minutes per case.

A number of problems were identified with paper records at NPRC which delayed collection of records for this study. Many records had been destroyed or partially destroyed in a 1973 fire at NPRC. The older paper records had been sprayed with insecticide and often contained large quantities of dust which had accumulated on files over the years, causing allergic reactions in researchers.

In spite of these setbacks, the percentage of files recovered was surprisingly high. Table 1 illustrates the level of effort and success of data retrieved and abstracted at DMDC and NPRC. Approximately 95 percent of the Project 100,000 cases and 90 percent of the PI cases were located. The greatest benefit of the NPRC effort proved to be the identification of names for cases that previously had been without names in the DMDC databases. Names were recovered for over 90 percent of the cases missing this information.

#### Locating Methods

Several alternative approaches are available to locate veterans. However, the success of these approaches largely rests upon the quality of data abstracted on participants (e.g., names, addresses, recency of data). Project personnel reviewed all data collected at NPRC and provided by DMDC and attempted to locate individuals in a systematic multi-method approach.

Use of Directory Assistance. Directory Assistance in each local area is often the best source for locating individuals when accurate information exists concerning city/state of residence. Telephone numbers were not



available from either the original sample tape or the NPRC military record information. In order for contact to begin on cases, interviewers first had to obtain listings for respondents or their relatives, using all addresses obtained from DMDC or NPRC. Furthermore, as data tended to be out-of-date or otherwise inaccurate, Directory Assistance was recontacted when new addresses for respondents were supplied by family members or other locating sources contacted.

Interviewers pursued all available listings for a given surname, in all but the largest cities. Directory Assistance operators in smaller towns proved to be excellent sources of locating information and providing information concerning additional local sources, such as the name of the postmaster, the phone number for the American Legion hall, phone numbers for local newspapers, and the like. However, these secondary sources rarely provided good leads for respondents or their family members.

Overall, Directory Assistance proved to be the most often used and the most useful locating tool. Directory Assistance was successful in locating respondents for 90 percent of completed interviews. The remaining ten percent of completed cases can primarily be attributed to the results of additional locating methods. However, for the majority of the remaining cases (74 percent), those pending interview, our use of Directory Assistance has been less than successful. Among the pending cases, 59 percent have Directory Assistance listings that have not been useful in locating the respondent. Another 31 percent of the cases have numbers that remain unconfirmed or have not led directly to the respondents.

Table 2 illustrates that Directory Assistance efforts have been slightly more successful for the Project 100,000 cases than for the PIs, even though the Project 100,000 address information available to us from the tape and/or the NPRC records was more outdated--as much as 20 years old for some. Through August, we had currently located and interviewed 202 (29 percent) of the Project 100,000 sample, while 246 (24 percent) of the PIs had been interviewed.

Department of Motor Vehicles Searches. State Departments of Motor Vehicles are an additional source for locating information, however this methodology proved problematic. Most states require requests be made by mail in a standardized form and charge a search fee of \$2 to \$6 per name, although some will waive this if proof of federal funding is supplied. Turnaround time is long, ranging from two weeks to two months. Furthermore, the periods for driver's license renewal are generally several years, so much of the information provided by motor vehicle departments is outdated. Also, if the respondents are deceased or institutionalized, motor vehicle checks usually do not uncover this information.

After initial efforts to locate respondents using motor vehicle departments, we adopted a new procedure to increase the effectiveness of the searches. The majority of the remaining unlocated cases were clustered in 14 key states. We contacted the motor vehicle departments in the 14 states and asked them to conduct searches for a list of 1,000 names sent to them. We also asked that they waive all search fees because the study was federally sponsored.

Ten of the 14 states responded with information, amounting to 340 returned addresses. Of these 340 returns, only 185 had new address information that corresponded to a current driver's license number. These addresses may be recent enough to generate new leads.

Military Locators. Military world-wide and base locators are available to determine the whereabouts of respondents identified as being on active duty or in the reserves. About 25 percent of all cases were identified as active duty or reserve. However, the use of military locators proved to be problematic. Each branch of the Armed Forces has separate locator sources to handle phone inquiries about personnel in the active forces and the reserves. Prior authorization from appropriate departments within each branch was required, and then relayed to the locators. We encountered some difficulties in gaining cooperation from several locators, especially those working with reserve records, despite obtaining prior authorization.

The majority of the respondents located through military locators were actually in the service, and for those who had been discharged, we were often able to secure new address information. A majority of the respondents located through military sources who were stationed in the continental United States were later contacted and interviewed. However, it was next to impossible to confirm the exact whereabouts of servicemen stationed overseas or to get accurate information about their return dates to the States. Furthermore, we found that for a significant proportion of what appeared to be active and reserve cases, the military status information proved to be incorrect.

Mail Contacting and Incentive Payments. The study did not originally feature incentive payments to respondents. This feature was added later, as a way to induce respondent cooperation more expeditiously, and to help reduce the contacting and locating costs which had continued to escalate. It was also hoped that family members would make a greater effort to forward our materials to the respondent once they were aware that payments were involved.

Initially, we mailed advance letters to respondents in which we had any address information that explained the purpose of the study and invited the respondent to participate. These letters also contained a phone number for the respondents to call to expedite the interviewing process. Most frequently, however, letters were mailed to the respondents' relatives or friends whom we had been able to locate and who had agreed to forward the letters. This meant that in the majority of cases with initial nonresponse, we could not be sure whether the respondents had actually seen the letters and decided not to participate, or whether they had never received the letters. Often when our interviewers recontacted the households of the respondents' relatives and/or friends, they learned that these people were seldom, if ever, in touch with the respondent.

As a consequence of these problems--but mainly because it was difficult to get into direct contact with the respondents--we began offering five and ten dollar call-in incentives. However, an incentive of ten dollars resulted in a response rate of less than two percent.

Accordingly, we decided to send postcards instead of letters, to better catch the attention of the respondents (or their friends or relatives). We also increased the payment amount to twenty-five dollars for call-ins. Postcards were sent to all possible addresses for respondents, that is, all addresses from the sample tapes, the NPRC record abstractions, and those found through locating calls made by interviewers. An interesting finding was that the postcards were delivered much more quickly than the letters had been. The number of calls received in response to the \$25 incentive increased by 67 cases. Many of the respondents who called were those who had been contacted several times, but who had not yet agreed to schedule an appointment for the interview.

A total of 1,024 postcards were sent, of which 165 were returned as undeliverable and 36 had address corrections. Of the 823 that we assumed reached the address on file, a total of 79 respondents called in. Of these, 71 completed the interview.

Veterans Administration. The Veterans Administration houses two extensive databases for veterans receiving disability compensation and educational benefits. We submitted names on all pending, unlocated cases to the V.A. record center in Austin, Texas. Initially, Austin conducted a computer match of all names against both main files. Locating information was then provided on these names by the VA Hospital in Hines, Illinois. The information from the tape is now being processed and will be analyzed for

its utility for locating the respondents. Table 3 shows the ratio of completed cases to cases attempted for each of the locating methods.

### Conclusions

Longitudinal locating efforts with the military populations presented several unique problems and challenges for personnel experienced in these areas. A major obstacle in locating veterans was caused by the poor quality and incompleteness of data records on veterans during the 1960s and 1970s. The Project 100,000 database contains names and addresses for less than 35 percent of that population. In addition, inconsistencies between data contained in several databases and paper records further complicated sampling and locating efforts. A number of PIs classified as low-aptitude accessions had scores which exceeded the minimum cutoff for their classification even after adjustments for the misnorming where made.

In this study, a major obstacle was the poor quality of all records. Even when addresses were available for veterans at time of separation, the addresses were up to 20 years old. However, overall veterans were interested and willing to participate in the thirty-minute telephone interview, responding positively to the study. Only three veterans of over 470 contacted declined to participate in the study.

NORC reported additional locating problems because of some characteristics of the low-aptitude veterans sample in comparison to similar locating efforts including: (1) a slightly higher percent of the populations made major geographical moves, (2) a slightly higher percent of veterans were



located within prisons or other institutions (3.8 percent), (3) many veterans lived with other family members having different names, and (4) a higher percent of individuals had unlisted telephone numbers.

At this point, veterans completing interviews are representative of their respective populations in terms of race, geographic region, aptitude, military status, and education. We are continuing locating efforts and interviews with respondents through a variety of methods. Information provided by DMV checks and the VA is presently being used to contact additional respondents.

This study is the first effort aimed at locating and interviewing large samples of low-aptitude veterans who separated from the military using military records that are on average 14 years old. The importance of this study lies in its findings concerning data quality of military records and report/results of using a variety of methodologies to conduct longitudinal data collection with veterans. Future researchers are encouraged to investigate multiple locating methodologies and assess the quality of existing data and known characteristics of the population prior to embarking on longitudinal data collection with special populations.

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<u>Veteran Status</u>	<u>Cohort</u>	
	1966-70	1976-80
Veteran	o Project 100,000	o Potentially Ineligibles
Nonveteran	o Low aptitude subset of NLS 66-81	o Low AFQT Subset of NLS '79-87

**FIGURE 1. Comparison Group Characteristics in Terms of Cohort and Veteran Status**

**TABLE 1**  
**QUALITY OF DATA ON VETERANS FROM DATABASES**  
**AND NPRC FILES**

	<u>Project 100,000</u>		<u>Potentially Ineligibles (PIs)</u>	
	N	Percent	N	Percent
<b><u>DMDC*</u></b>				
Sample Size Selected	1,396	-	1,426	-
Cases in First Replicate	700	-	1,020	-
Cases Without Names	546	78	159	16
<b><u>NPRC</u></b>				
Cases Submitted to NPRC	865	-	980	-
Case Records Containing Locating Data	806	93	871	89
Cases Returned with Names	35	94	36	79
Approximate Time Required to Review Case File	50 minutes		45 minutes	

\* 1,396 and 1,426 cases were originally selected by DMDC for the Project 100,000 and PI samples, respectively. Replicate sampling was used and interviewing was restricted to cases in the first replicate sample for each group, 700 and 1,020 cases, respectively. However, 865 cases from the first three replicates of the Project 100,000 sample were submitted to NPRC for locating information.

TABLE 2  
RESULTS OF DIRECTORY ASSISTANCE

	PROJECT 100,000 (n=700)				POTENTIALLY INELIGIBLES (n=1,020)			
	Completed Cases		Pending Cases		Completed Cases		Pending Cases	
	n	%	n	%	n	%	n	%
	202	29	498	71	246	24	774	76
Did not receive phone number	4	2	100	20	30	12	294	38
Received phone #s for 1-3 relatives/friends	181	90	279	56	212	86	434	56
Received phone #s for over 3 relatives/friends	17	8	119	24	4	2	46	6
Reached respondent on first attempt	8	4	--	--	12	6	--	--
Reached respondent in 2-3 attempts	81	40	--	--	54	22	--	--
Reached respondent after more than 3 attempts	113	56	--	--	180	72	--	--
Did not reach respondent (up to 6 attempts)	--	--	498	71	--	--	774	76
Used D.A. 1-3 times	182	90	449	90	227	92	630	80
Used D.A. more than 3 times	20	10	49	10	19	8	144	20

\* Numbers and percentages based on a random selection and review of 100 completed cases and 100 pending cases

TABLE 3

## COMPARISON OF METHODS USED TO LOCATE VETERANS

	<u>Directory<sup>1</sup> Assistance</u>	<u>Department of Motor Vehicles</u>	<u>Incentive Payments</u>	<u>Revised DMDC Database</u>	<u>Veterans Administration</u>
Cases Attempted to Locate	1,720	1,000	1,024	132	2,244
New Addresses or Telephone #s Leading to Respondent	404	340	79	71	*
Completed Cases	377	185**	71	43**	*
Success Ratio	1:4.6	1:5.4	1:14.4	1:3.1	*

\* Information not currently available

\*\* Estimated number of cases that will be completed based on data collected from this methodology

<sup>1</sup> Accurate information on last residence from DMDC and NPRC was used to track a majority of the cases located.

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Abstract

This paper investigates the utility of various procedures used to locate and interview veterans as part of a longitudinal research study being conducted for the Department of Defense (DoD). The populations are comprised of below entry aptitude standards males who entered the military during the late sixties as part of Project 100,000 and Potentially Ineligibles who entered between 1976-80 as a result of the misnorming of the enlistment exam scores. A variety of methods were utilized to locate subjects. Data are being gathered from telephone interviews with random samples of both populations and compared to existing data collected from the National Longitudinal Surveys on equivalent samples of low-aptitude nonveteran males. Future researchers are encouraged to investigate multiple locating methodologies and assess the quality of existing data and know characteristics of the population prior to embarking on longitudinal data collection with special populations.